

CORNELL UNIVERSITY

OFFICIAL PUBLICATION

JANUARY 27, 1952

College of Architecture

ANNOUNCEMENT
FOR 1952-53 SESSIONS



The University Calendar

1952-53

1953-54

FALL TERM

FALL TERM

Freshman Orientation	Sept. 19, <i>F</i>	Sept. 17, <i>Th</i>
Registration	Sept. 22-23, <i>M-T</i>	Sept. 21-22, <i>M-T</i>
Instruction begins	Sept. 24, <i>W</i> , 1 p.m.	Sept. 23, <i>W</i> , 1 p.m.
Midterm grades due	Nov. 12, <i>W</i>	Nov. 11, <i>W</i>

Thanksgiving recess:

Instruction suspended	Nov. 26, <i>W</i> , 12:50 p.m.	Nov. 25, <i>W</i> , 12:50 p.m.
Instruction resumed	Dec. 1, <i>M</i> , 8 a.m.	Nov. 30, <i>M</i> , 8 a.m.

Christmas recess:

Instruction suspended	Dec. 20, <i>S</i> , 12:50 p.m.	Dec. 19, <i>S</i> , 12:50 p.m.
Instruction resumed	Jan. 5, <i>M</i> , 8 a.m.	Jan. 4, <i>M</i> , 8 a.m.
Examinations begin	Jan. 26, <i>M</i>	Jan. 25, <i>M</i>
Examinations end	Feb. 4, <i>W</i>	Feb. 3, <i>W</i>
Midyear holiday	Feb. 5, <i>Th</i>	Feb. 4, <i>Th</i>

SPRING TERM

SPRING TERM

Registration	Feb. 6-7, <i>F-S</i>	Feb. 5-6, <i>F-S</i>
Instruction begins	Feb. 9, <i>M</i>	Feb. 8, <i>M</i>
Midterm grades due	Mar. 28, <i>S</i>	Mar. 27, <i>S</i>

Spring recess:

Instruction suspended	Mar. 28, <i>S</i> , 12:50 p.m.	Mar. 27, <i>S</i> , 12:50 p.m.
Instruction resumed	Apr. 6, <i>M</i> , 8 a.m.	Apr. 5, <i>M</i> , 8 a.m.
Examinations begin	June 1, <i>M</i>	May 31, <i>M</i>
Examinations end	June 9, <i>T</i>	June 8, <i>T</i>
Commencement Day	June 15, <i>M</i>	June 14, <i>M</i>

CORNELL UNIVERSITY OFFICIAL PUBLICATION

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Faculty

- DEANE WALDO MALOTT, A.B., M.B.A., LL.D., President of the University.
THOMAS W. MACKESEY, B.Arch., M.C.P., Dean and Professor of Regional Planning.
DONALD LORD FINLAYSON, M.A., Professor of Fine Arts and Curator of the Chapman and Clark Collections.
HUBERT E. BAXTER, B.Arch., Professor of Architecture.
JOHN NEAL TILTON, M.Arch., Professor of Architecture.
GILMORE D. CLARKE, B.S., L.H.D., Professor of Landscape Architecture.
JOHN A. HARTELL, B.Arch., Professor of Architecture. In charge of instruction in Fine Arts.
FREDERICK O. WAAGE, Ph.D., Professor of the History of Art and Archaeology.
A. HENRY DETWEILER, B.Arch., Professor of Architecture.
FREDERICK M. WELLS, B.Arch., Andrew Dickson White Professor of Architecture.
LUDLOW D. BROWN, M.Arch., Professor of Architecture.
THOMAS H. CANFIELD, B.S. in Arch., Professor of Architecture.
JAMES O. MAHONEY, A.B., B.F.A., F.A.A.R., Associate Professor of Fine Arts.
STUART M. BARNETTE, B.S. in Arch., Associate Professor of Architecture.
NORMAN D. DALY, B.F.A., M.A., Associate Professor of Fine Arts.
JOSEPH M. HANSON, A.M.C., Associate Professor of Fine Arts.
FREDERICK W. EDMONDSON, B.L.A., F.A.A.R., Associate Professor of Landscape Architecture.
JOHN W. REPS, A.B., M.R.P., Associate Professor of Regional Planning.
KENNETH EVETT, M.A., Assistant Professor of Fine Arts.
VICTOR COLBY, M.F.A., Assistant Professor of Fine Arts.
ERIC QUELL, B.Arch., Instructor in Architecture and Secretary of the Faculty.
ALLEN C. ATWELL, M.F.A., Instructor in Fine Arts.
ROBERT C. HOOVER, M.R.P., Ph.D., Lecturer in City Planning.
EUGENE LITWAK, B.A., Research Associate in Architecture.
FRANK WEISE, M.Arch., Research Associate in Architecture.
- MONICA M. FULLER, Assistant to the Dean.
ETTA ARNTZEN, A.B., B.L.S., Librarian.
MARION B. DAVIS, Library Assistant.

The College of Architecture

AT CORNELL from the first there was a place in the University system for a school of architecture. Although this University owes its foundation to the federal and state governments and to Ezra Cornell, it derives its distinctive character primarily from the ideas of Andrew Dickson White, one of its sponsors, who became its first president. The initial plan of organization, which the trustees adopted at their first meeting in 1865, was White's plan. It called for the setting up of certain essential departments of instruction, one of which was to be architecture. That recognition of a department of architecture as an integral part of a university was a new and bold concept.

A modest department of architecture was established in 1871, three years after the University was opened. It was fortunate to have President White himself for a patron. He had cultivated an intelligent interest in architecture from boyhood, as he records in his autobiography, and during journeys abroad his "pet extravagance" had been the collection of books and other material relating to it. He gave the new department all that had accumulated—a large architectural library and several thousand architectural photographs, drawings, casts, models, and other items of material from all parts of Europe—a collection then almost unique. His gift formed the nucleus of an increasingly useful library and store of illustrative equipment.

In the course of time, as the University perfected its organization, the department became the College of Architecture, having grown to a respectable size and given other evidence of maturity. In 1922 it took under its charge a well developed course in landscape architecture, adopting a department which the College of Agriculture at Cornell had been rearing since 1904. This union has proved to be invigorating, for it has enriched the instruction in architecture and landscape architecture alike. A department of painting and sculpture, organized in 1921, has had a similar effect, demonstrating the mutual value of correlated instruction in kindred arts. A University department, Regional and City Planning, subsidized for a period of five years (1935-39, inclusive) by the Carnegie Corporation, was made a part of the College of Architecture in 1935.

As long ago as 1922 the College set a limit to the number of its students and devised a selective method of admission. It now has an active Faculty of twenty-four and at present enrolls about 230 students. Teach-

ers and students in such a proportion mix together freely, and instruction and criticism are on an individual basis.

Although the College of Architecture is distinctly a professional school aiming at professional competence, it cannot afford to forget that it is a unit in a system of education and that its professional graduates are the better for being educated persons. That conviction may be reflected to some extent in the catalogue of courses, but not all of its effects can be catalogued. It is implicit in the teaching. It accounts for the credit to be earned by elective studies and for this College's organic articulation with various other University divisions. The candidate for any of the professional degrees normally does much of his work under professors of other arts and sciences. In his leisure time he can find means of acquaintance with any of the diverse human interests that occupy the members of a university.

PROFESSIONAL COURSES

REQUIREMENTS FOR THE DEGREES . . . The student's work is planned to lead to one of several professional degrees: in Architecture to the degrees of Bachelor of Architecture (B.Arch.) and Master of Architecture (M.Arch., Graduate School); in Land Planning to that of Bachelor of Science in Land Planning (B.S. in L.P.); in Landscape Architecture to that of Master of Landscape Architecture (M.L.A., Graduate School); in Art to that of Bachelor of Fine Arts (B.F.A.) and Master of Fine Arts (M.F.A., Graduate School); and in Regional and City Planning to that of Master in Regional Planning (M.R.P., Graduate School). Typical courses of study are described and analyzed on pages 00-00.

The normal period of the undergraduate course of study in Architecture is five years (based on two terms each calendar year in the normal curriculum), although a student with exceptionally thorough preparation may satisfy the requirements for the degree in somewhat less time. Some students who have entered the college after taking an A.B. or B.S. degree have earned the professional degree in four years. The course of study in Land Planning and in Fine Arts is four years. About one-third of the average entering class have had some college experience. In no case, however, can the rate of a beginner's progress be predicted, as that will depend in large part upon the quality of his work, not alone upon the quantity of it. In any term the number of hours of work that the student is permitted to carry is determined by the grade of what he has already done.

Students admitted to the curricula in Architecture or Land Planning without the entrance requirement in foreign language must study a foreign language in order to satisfy the requirements for the degree.

ELECTIVE STUDIES . . . As a general rule the first year of each professional course is designed to lay the foundation for the major subjects of the technical program and incidentally to permit the first year student to test his fitness to go on with that program. Throughout the remaining four years opportunities for elective studies are offered in such a sequence that increasing maturity of mind may enable the student to make the most profitable use of them. In each of these professional courses of study about one-fifth of the work leading to the degree is elective, consisting of studies to be chosen by the student himself, with the advice and approval of members of the Faculty, from the offerings of any college of the University. Such studies are intended to be liberally educational, developing some native intellectual faculty or interest quite outside the range of the professional course. A minor part of the time allotted to electives may, however, be used for intensive study in some one division of the professional requirement in which a student may prove to be either especially interested and competent or somewhat deficient.

COURSES OF STUDY CORRELATED . . . Students in each of the professional courses of study profit by their daily association in the drafting rooms and studios. A close correlation exists between the courses of Architecture and Land Planning; much of the instruction, especially in the early years, is the same in both. From time to time there are problems in design requiring the formal collaboration of architect, landscape architect, painter, and sculptor. Students in Architecture, Landscape Architecture, and Regional and City Planning work together in the drafting rooms, often under the same instruction, with the professors of each department constantly in touch with the students of the other.

INFORMAL STUDIES . . . Under certain conditions a qualified student may expedite his progress by pursuing an Informal Study course, in which he will be permitted to make some departure from the prescribed course of study for the sake of doing more intensive work in one or another section of it. The Faculty may grant this privilege to a student who has done especially meritorious work in the College and who asks for it by formal petition bearing his Faculty adviser's approval. The student admitted to such a course will do his work under the adviser's supervision, and the Faculty will grant him periodical credit commensurate with his progress.

THESIS . . . The satisfactory completion of a thesis is required of every candidate for the Bachelor's degree in Architecture and of every candidate for an advanced degree. The thesis must be completed during the last term of residence. It consists of an independent study, the subject of which has been selected by the student with the Faculty's approval.

UNIVERSITY REQUIREMENTS

MILITARY TRAINING . . . All physically qualified undergraduate men who are American citizens must take military training during their first four terms. Enrollment in the basic course of military science and tactics or air science and tactics, or in the first two years of naval science, satisfies this requirement. Students transferring to Cornell from other institutions are exempt from part or all of the requirement, according to the number of terms of residence in college before transfer, and service in the armed forces also satisfies the military training obligation. Entering students who have had ROTC training in secondary or military schools are requested to bring WD AGO Form 131—Student's Record for presentation to the Department of Military Science and Tactics at the time of registration (see also page 36 of this Announcement).

PHYSICAL TRAINING . . . All undergraduate students must complete four terms of work, three hours a week, in physical training. Ordinarily, this requirement must be completed in the first two years of residence; postponements are to be allowed only by consent of the University Faculty Committee on Requirements for Graduation (see page 37).

Exemption from this requirement may be made by the committee designated above, when it is recommended by the Medical Office; or when unusual conditions of age, residence, or outside responsibilities require it; or when students pass physical proficiency tests administered by the Department of Physical Education.

For students entering with advanced standing, the number of terms of physical training required is to be reduced by the number of terms which the student has satisfactorily completed (whether or not physical training was included in his program) in a college of recognized standing.

ENTRANCE REQUIREMENTS

ADMISSION TO THE COLLEGE . . . The entrance requirements of the College of Architecture are to be found in *General Information*, which may be obtained by writing to Official Publication, Edmund Ezra Day Hall, Cornell University, Ithaca, N.Y. The University's rules governing admission to any of its colleges are also given there. Prospective students should address the Director of Admissions, Cornell University, when asking for forms to be used in making application for admission.

Veterans are advised to consult the office of veterans' education, Edmund Ezra Day Hall, Cornell University, Ithaca, N.Y.

ADMISSION TO ADVANCED STANDING . . . A student who has already attended a technical school or other institution of collegiate rank may be admitted at the beginning of the fall term or, if a satisfactory schedule can be arranged, at the beginning of the spring term. The ap-

plicant is required to meet all entrance requirements and to comply with the rules governing admission. In addition he should file with the Director of Admissions an official transcript of record of his work at the institution already attended, together with a certificate of honorable dismissal therefrom. He should also send a catalogue of that institution, writing his name thereon, and marking the courses which he has taken as listed in the official transcript. Advanced credit for courses in the College of Architecture is given only upon examination by the department concerned. A preliminary ruling will, however, be made by the Committee on Admissions on the evidence submitted.

ADMISSION AS A SPECIAL STUDENT . . . Special students are of two classes, as follows:

(1) A person, especially one of comparative maturity, may, in certain circumstances, even without satisfying the entrance requirements, be admitted as a special student not a candidate for a degree. The applicant must give evidence of ability to do creditable work in the College, and his application for admission must be recommended by the department in which he proposes to do the main part of his work. He must file his application with the Director of Admissions.

If a person admitted as a special student without satisfying the entrance requirements subsequently satisfies those requirements, he may be graduated under the ordinary regulations of the College. He will not be permitted, however, to make up deficiencies in entrance subjects by attending University instruction in those subjects.

Special students in the College of Architecture must be at least twenty-one years of age.

(2) A person who already holds a baccalaureate degree and wishes to pursue further work at the undergraduate level may also apply for admission as a special student, regardless of the age requirements stated above. Such a student must have had adequate preparation for the program contemplated and must secure the approval of the College. He must file his application with the Director of Admissions.

THE COLLEGE'S EQUIPMENT

BUILDINGS . . . The College occupies parts of White Hall, Morse Hall, and the top floor of Franklin Hall. The College offices, library, and exhibition rooms are on the third floor of White Hall; three drafting rooms, opening together to form virtually a single room measuring 45 by 156 feet, occupy the entire fourth floor. In Morse Hall are other drafting rooms. Well lighted studios devoted to the work in drawing, painting, and sculpture are in Morse Hall and Franklin Hall.

LIBRARIES . . . The College's library comprises more than 13,000 volumes. It is adapted to use as a working collection and to the require-

ments of research. All the leading professional periodicals, American and foreign, are currently received and are preserved in bound volumes. There are also at hand a highly developed collection of photographs, color prints, and drawings and a growing collection of lantern slides, many of them in color, which now numbers more than 45,000. The University Library, the special libraries of various departments, and a "browsing library" for recreational reading in Willard Straight Hall, the University community center, are available to students.

EXHIBITIONS . . . Art galleries are maintained in Morse Hall and in Willard Straight Hall, where loan exhibitions of paintings and graphic work by contemporary artists are held. Selections from the Chapman Print Collection are from time to time placed on view. The work of students is currently shown in the exhibition rooms of White Hall and Morse Hall.

UNIVERSITY PRIVILEGES

The student of the College of Architecture is entitled to the use of all the University's general facilities and privileges. He may elect courses of study in any of the University's colleges. Cornell has all the usual extracurricular activities ordinarily to be found at a university, and they are open to all students. They include musical and dramatic clubs, undergraduate publications, religious, social, and professional organizations, and a great variety of athletic sports both intramural and intercollegiate.

LECTURES . . . University endowments provide numerous public lectures in the course of every year, given by visiting scholars, scientists, and public men, both American and foreign. All such lectures are free to members of the University community.

HEALTH SERVICES AND MEDICAL CARE . . . These services are centered in the University Clinic or out-patient department and in the Cornell Infirmary or hospital. Students are entitled to unlimited visits at the Clinic; laboratory and X-ray examinations indicated for diagnosis and treatment; hospitalization in the Infirmary with medical care for a maximum of fourteen days each term and emergency surgical care. The cost for these services is included in the College and University general fee. For further details, including charges for special services, see the *General Information* booklet.

TUITION AND FEES

Information concerning tuition, fees, living conditions, residential halls, means of self-help, etc., is given in the *General Information* booklet. That publication gives various other items of information applicable to all students, and it should be read in connection with this Announcement.

FELLOWSHIPS AND SCHOLARSHIPS

Four Tuition Scholarships may be awarded to students registered in the College of Architecture. They carry free tuition and are awarded primarily on the basis of financial need and scholarship. Partial awards may be made. Entering students are eligible for consideration.

Three Scholarships may be awarded annually to graduates of four-year schools, with any baccalaureate degree, who are not eligible for admission to the Graduate School. They have a value of \$300 a year.

Gillespie Prize Scholarships. Two scholarships of \$400 each may be awarded each year to fourth or fifth year students in Architecture. These awards are made from the bequest to the College of the late Albert D. Gillespie, '87 (Sp.), and are granted on the basis of general academic performance and need.

Robert James Eidlitz Fellowship. A graduate fellowship in Architecture, valued at approximately \$1,200, provides for an exceptionally promising graduate of this College, who could not otherwise afford it, an opportunity to supplement, in such ways and in such places as may be best suited to his individual needs, the professional training which he has received.

Fellowships of the American Academy in Rome. Fellowships are offered annually in Architecture, Landscape Architecture, Painting, and Sculpture, for award respectively to the winners of special competitions. They afford the fellows a residence of two years at the American Academy in Rome and the means of European travel. The total value of each fellowship amounts to about \$3,000. Graduates of this College are eligible to compete for these fellowships.

Tuition Scholarships. For students in the Graduate School there are provided thirty tuition scholarships. They entitle the holder to exemption from the payment of tuition fees, but not other fees, for the duration of the appointment. Application should be made to the professor or professors under whose supervision the applicant is working, or to the office of the Graduate School. Awards are made in May of each year.

University Fellowships. One or more awards of \$400 with free tuition may be made annually for graduate study in Architecture, Landscape Architecture, Regional and City Planning, or the Fine Arts.

Skidmore, Owings and Merrill Scholarship (Gift of Skidmore, Owings and Merrill, Architects and Engineers). Open to fifth year students in Architecture. Annual award, \$1,000. Awarded primarily on the basis of academic performance and professional promise.

For information concerning other scholarships that are open to students of this College in common with other students of the University, consult the leaflet *Scholarships and Grants-in-Aid*, which may be obtained by writing to Cornell University Official Publication, Edmund Ezra Day Hall, Ithaca, N.Y.

MEDALS AND PRIZES

The Charles Goodwin Sands Memorial Medal, founded in 1900 by the family of Charles Goodwin Sands of the class of 1890, may be awarded for work of exceptional merit done by a student in the courses in architectural design or landscape design, or by a student in the Fine Arts curriculum for work of exceptional merit in painting and composition or sculpture. Theses in architecture, landscape architecture, or painting and sculpture are eligible for medal consideration. Two grades of this medal, the silver and bronze, are recognized.

The Clifton Beckwith Brown Memorial Medal was established in 1901 by John Harkness Brown in memory of his brother, Clifton Beckwith Brown of the class of 1900, who was killed on the field of battle at San Juan Hill. A silver replica is awarded by the Faculty to that member of the graduating class who has attained the highest standing in Courses 106, 107, 108, and 109; or 150, 151, and 152. The award is withheld if the standard is not considerably higher than that required for graduation.

The Faculty Medal in Fine Arts is awarded each year to the member of the graduating class in the curriculum in Fine Arts who, by his academic record and his work in the studio, has, in the estimation of the Faculty, shown the greatest promise of future achievement in the field of Fine Arts.

The Student Medal of the American Institute of Architects is awarded to the member of the graduating class in Architecture who has maintained the best record throughout the entire course.

The Award for Excellence in Design, given by the Central New York Chapter, A.I.A., is a cash prize of \$50 awarded at the discretion of the design staff.

The Fuertes Memorial Prizes in Public Speaking, founded in 1912 by Charles H. Baker, a graduate of the School of Civil Engineering of the class of 1886, are offered annually to members of the junior and senior classes in the Colleges of Engineering and Architecture for excellence in public speaking. There are three prizes of \$80, \$40, and \$20, respectively.

The Paul Dickinson Prize, established in 1927 by Mrs. George A. Shedden of the class of 1923 in memory of her father, is awarded to the

student in the first year class of the College of Architecture who has attained the highest record. This prize is not awarded unless the record is well above the average of first year work in the College.

The Edwin A. Seipp Memorial Prizes, one of \$50 and one of \$25, were established in 1948 by Mrs. E. A. Seipp in memory of her husband, an alumnus of the class of 1905. They are awarded as first and second prizes in a special competition in design.

The Baird Prizes, one of \$25 and one of \$15, are awarded as first and second prizes in a special sketch problem competition in fourth and fifth year design, Courses 106-109 inclusive. The problem, lasting six days, is given during the early part of the second term and is of a decorative nature. The fund, established in 1927, was the gift of Mrs. M. Z. Baird. The income (or, in the discretion of the Faculty of the College of Architecture, the principal) is to be used for the purposes of this College. It was designated as a prize fund by the Faculty in 1927.

The Edward Palmer York Memorial Prizes, one of \$25 and one of \$15, are awarded as first and second prizes in a special competition for students in Intermediate and Junior Design, Courses 102-105 inclusive, and Courses 150-151. The problem, lasting approximately one week, is given in the second term.

The Robinson Prize, established in 1936 by C. D. Robinson, Jr., of the class of 1930, and amounting to \$25, may be awarded annually for superior advanced work in the history of architecture.

The New York Society of Architects' Medal and Certificate are awarded annually for excellence in construction to that senior student who, in the opinion of the Faculty and the society's committee, is the leader of his class in construction as applied to architecture.

GRADUATE STUDY

The Graduate School of Cornell University offers the degrees of Master of Architecture (M.Arch.), Master of Landscape Architecture (M.L.A.), Master of Fine Arts (M.F.A.), and Master in Regional Planning (M.R.P.).

The requirements for advanced degrees are based upon the completion of a definite period of residence, the presentation of a satisfactory thesis, and the passing of an examination. The graduate student's work is expected to be independent and original.

To be admitted to candidacy for the M.Arch., M.L.A., M.F.A., or M.R.P. degree, an applicant must be qualified under the Graduate School's general rules of admission (to be found in the *Announcement of the Graduate School*) and must have had a training at least equivalent

to that which this university requires of candidates for the baccalaureate degree specializing in the undergraduate course that corresponds to the kind of study—historical, theoretical, or creative—which the applicant proposes to pursue. The applicant's credentials and his plan of study must be submitted to the executive committee of the Graduate School's Division of Architecture and Fine Arts, and admission is subject to that committee's approval.

The degree of Master of Architecture is awarded upon successful completion of a plan of study prepared in consultation with a Faculty committee. The student may engage in advanced work in architectural design, in the history of architecture, or in construction.

The degree of Master of Landscape Architecture is awarded upon successful completion of a plan of study prepared in consultation with a Faculty committee. This degree may be obtained following one year of study by recipients of the degree of Bachelor of Science in Land Planning.

The degree of Master in Regional Planning is offered to students who satisfactorily meet the requirements set forth on page 23.

A general statement concerning the requirements for the degree of Master of Fine Arts will be found on page 18.

Students preparing themselves for the teaching of art in the elementary or secondary schools may become candidates for the degree of Master of Education (M.Ed.), administered by the School of Education under the jurisdiction of the Graduate School. For further information, consult the *Announcement of the School of Education*.

Courses of Study Leading to Degrees

THE following pages are devoted to a description and analysis of the several courses of study which the College offers—some of them in conjunction with other University divisions—looking to professional training in Architecture, Land Planning, Regional and City Planning, or the Fine Arts.

REQUIRED WORK . . . The requirement for each degree is the completion of a specified number of hours of work, exclusive of the University's requirements in military training and physical training. The "hour," as a unit of requirement, represents attendance once a week in lecture or recitation, or in a laboratory exercise or drafting room period ordinarily lasting two and one-half hours.

Every student must register in each term for at least twelve hours; no student may register for more than eighteen hours in any one term except by permission, and such permission will normally not be granted before a student's third year. A student on probation may not register for more than fifteen hours in addition to physical training and military training.

BACHELOR OF ARCHITECTURE

The courses of study which lead to the degree of Bachelor of Architecture are designed to afford both the technical and the cultural foundation for professional work. They recognize the dependence of the profession of architecture not only upon technical skill but also upon a cultivated taste and a creative imagination. They emphasize the architect's obligation to society as well as to the client.

The architect today must be a person of many talents. He must be an artist and an engineer, an administrator, and a coordinator of the work of experts in many fields. Above all, he should have a broad understanding of fundamental human values and problems.

The five year, ten term curriculum in Architecture outlined on the following page includes a thorough training in the basic skills and intellectual disciplines needed by the architect. The main body of courses contains more than the minimum of instruction required for professional registration by the National Council of Architectural Registration Boards and by New York State. In addition, the student is expected to enlarge his understanding of the liberal arts and sciences through elective courses chosen in consultation with his Faculty adviser. Opportunity is also provided for the student to strengthen his architectural training through the selection of additional courses in such areas as construction, regional and city planning, or the fine arts.

CURRICULUM

17

BACHELOR OF ARCHITECTURE

		HOURS	
		<i>First Term</i>	<i>Second Term</i>
FIRST YEAR 31 Hours	Architectural Design, 100, 101	3	3
	Descriptive Geometry, 500, 501	4	3
	Drawing and Painting, 310, 311	3	3
	English Composition, 111, 112	3	3
	Analytic Geometry and Calculus, 161	3	0
	Mechanics, 200	0	3
SECOND YEAR 32 Hours	Architectural Design, 102, 103	4	4
	Mechanics, 201, 202	3	3
	History of Architecture, 404, 405	3	3
	Drawing and Painting, 312	3	0
	Sculpture, 330	0	3
	Electives	3	3
THIRD YEAR 32 Hours	Architectural Design, 104, 105	4	4
	Structural Design, 203, 204	3	3
	History of Architecture, 406, 407	3	3
	Materials and Construction, 601, 602	3	3
	Electives	3	3
FOURTH YEAR 34 Hours	Architectural Design, 106, 107	5	5
	City Planning, 710	3	0
	Working Drawings, 604	3	0
	Reinforced Concrete Design, C.E. 2715	3	0
	Drawing and Painting or Sculpture	0	3
	History of Architecture, 408	0	3
	Specifications, 605	0	3
	Electives	3	3
FIFTH YEAR 30 Hours	Architectural Design, 108	10	0
	Thesis, 109	0	10
	Modern Architecture, 409	2	0
	Building Structure, 206	1	0
	Professional Practice, 621	0	1
	Electives	3	3

The University requirements in military training and physical training must be met in addition to the courses listed.

At least half of the elective requirement should be chosen from liberal and non-technical courses offered in other divisions of the University. On approval of the Dean, special programs of elective work may be arranged to meet the needs of individual students.

BACHELOR OF FINE ARTS

The course of study leading to the degree of Bachelor of Fine Arts offers an opportunity for the student to obtain a general college education with the practice of painting or sculpture as the major field of study. The courses which constitute the major subject are designed to promote a knowledge and critical understanding of these arts through a study of their formal aspects and of their place in the societies of the past and present, as well as to develop the individual student's talent in the practice of the art he chooses to concentrate upon. Approximately half of the student's time through the four year course is spent in these studies, while the remainder is occupied by a well rounded program of academic subjects. Ample opportunity is provided for the student to elect additional work in the subjects which are of particular interest to him.

Students with special aptitude in the field of painting or sculpture who wish to pursue further studies upon successful completion of this course, or its substantial equivalent, may apply for admission to the Graduate School as candidates either for the degree of Master of Fine Arts or for the degree of Master of Education.

MASTER OF FINE ARTS

The additional two years of study required for the completion of work leading to the degree of Master of Fine Arts provide intensive training in the practice of painting or sculpture, through which the talented student may prepare himself for a professional career or qualify himself for a teaching post. The history and theory of art will normally be the minor field of study.

MASTER OF EDUCATION

The degree of Master of Education is conferred upon successful candidates after one additional year of study. The student attaining this degree will qualify for a certificate as a teacher of art in the elementary and secondary schools under the regulations of the New York State Department of Education.

BACHELOR OF FINE ARTS

		HOURS	
		First Term	Second Term
FIRST YEAR	Painting and Composition, 300, 301	3	3
30 Hours	Figure Construction, 340, 341	3	3
	Introduction to Art, F.A. 101, 102	3	3
	English Composition, 111, 112	3	3
	History (elective)	3	3
SECOND YEAR	Painting and Composition, 302, 303	3	3
30 Hours	Sculpture, 330, 331	3	3
	Arts of Design, 350	3	0
	Problems of Painting, 353	0	3
	History of the Fine Arts (elective)	3	3
	Science (elective)	3	3
<i>Painting</i>			
THIRD YEAR	Painting and Composition, 304, 305	5	5
34 Hours	Methods and Materials of Painting, 322, 323	3	3
	Printmaking, 321	0	3
	History of the Fine Arts (elective)	0	3
	Foreign Language (elective)	6	0
	Electives	3	3
FOURTH YEAR	Painting and Composition, 306, 307	5	5
34 Hours	Figure Composition, 342, 343	3	3
	Electives	9	9
<i>Sculpture</i>			
THIRD YEAR	Sculpture, 332, 333	5	5
34 Hours	Problems of Sculpture, 356	3	0
	Methods and Materials of Sculpture, 326	0	3
	Printmaking, 321	0	3
	History of the Fine Arts (elective)	0	3
	Foreign Language (elective)	6	0
	Electives	3	3
FOURTH YEAR	Sculpture, 334, 335	5	5
34 Hours	Figure Composition, 342, 343	3	3
	Electives	9	9

The University requirements in military training and physical training must be met in addition to the courses listed.

Students may take a maximum of six hours of the elective requirement in studio courses.

BACHELOR OF SCIENCE IN LAND PLANNING

The purpose of the curriculum in Land Planning is to provide students with a basic professional competence in the fields of Landscape Architecture and City Planning. The emphasis is upon design—architectural design, landscape design, and city planning design. Parallel with the design courses is a core of studies in engineering, particularly highway engineering.

Professional practice in Landscape Architecture has shifted in recent years from the design of private estates to the layout of large-scale public and private projects—site planning for groups of buildings including housing projects, highways, parkways, and works of similar nature. The curriculum recognizes this shift and is designed to provide the student with knowledge and experience in the fields of greatest professional opportunity and usefulness in Landscape Architecture.

Graduates of this course may earn the degree of Master of Landscape Architecture in one additional year of study in the Graduate School.

The curriculum in Land Planning is an excellent basic education for later specialized graduate study of City and Regional Planning. Undergraduates contemplating a career in this field are advised to enter this curriculum.

BACHELOR OF SCIENCE IN LAND PLANNING

		HOURS	
		<i>First</i>	<i>Second</i>
		<i>Term</i>	<i>Term</i>
FIRST YEAR	Architectural Design, 100, 101	3	3
31 Hours	Descriptive Geometry, 500, 501	4	3
	Drawing and Painting, 310, 311	3	3
	English Composition, 111, 112	3	3
	Analytic Geometry and Calculus, 161	3	0
	Mechanics of Materials, 200	0	3
SECOND YEAR	Architectural Design, 102, 103	4	4
31 Hours	Mechanics of Materials, 201	3	0
	History of Architecture, 400, 401	3	3
	Soils Engineering, C.E. 2725	3	0
	Elementary Surveying, C.E. 2111	0	2
	History of Landscape Architecture, 450	0	3
	Botany, 1	3	3
THIRD YEAR	Landscape Design, 150, 151	4	4
32 Hours	History of City Planning, 700	3	0
	Principles of City Planning, 710	3	0
	Plant Materials, Floriculture 13	0	3
	Advanced Surveying, C.E. 2112	3	0
	Route and Aerial Surveying, C.E. 2113	0	3
	Highway Engineering, C.E. 2610	0	3
	Elective	3	3
FOURTH YEAR	City Planning Design, 718	8	0
34 Hours	Landscape Design, 152	0	8
	Landscape Construction, 660	3	0
	Planting Design, 650	0	3
	Drawing and Painting, 312	3	0
	City Planning Practice, 711	0	3
	Elective	3	3

The University requirements in military training and physical training must be met in addition to the courses listed.

MASTER OF LANDSCAPE ARCHITECTURE

The purpose of landscape architecture, as a fine art, is to prepare areas of land for human use and enjoyment and at the same time to preserve, enhance, and create beauty in the landscape. The range of professional practice must include a knowledge of all the materials, methods, and processes that are needed for the planning of a finished piece of work. Fundamental training in architecture, in engineering, and in horticulture is required for the landscape architect's equipment. His range should be even wider, for he needs to acquire facility of expression in the graphic arts, familiarity with the arts of painting and sculpture, and acquaintance with such diverse subjects as regional and city planning, history, civil government, economics, sociology, geology, and forestry.

The curriculum leading to the degree of Master of Landscape Architecture puts emphasis on a correlative study of architecture as an aid in training the student's aesthetic judgment and his mastery of applied design in his own field. It recognizes that he will need a sympathetic knowledge of the architect's professional problems and point of view, a disciplined sense of the relation of buildings to land, and a ready skill in the treatment of their surroundings if he is to deal successfully with the larger problems involved in the development of land for varieties of human use, including work related to the planning of cities, towns, housing developments, parks, parkways, and expressways.

Students who have completed the course of study in Land Planning may earn the degree of Master of Landscape Architecture in one additional year.

Attention is invited to the fact that it is possible to arrange a six-year course of study which leads to the degree of Bachelor of Architecture at the end of five years and to the degree of Master of Landscape Architecture at the end of one additional year. This course of study is recommended for those who expect to enter the profession of Landscape Architecture where a license to practice is desirable. In this manner the student of landscape architecture is given the basic educational requirements necessary to obtain a professional license for the practice of architecture.

MASTER IN REGIONAL PLANNING

The degree of Master in Regional Planning is offered to students registered in the Graduate School who major in Regional and City Planning. Students with a background in architecture, landscape architecture, engineering, economics, sociology, geography, government, or agricultural economics may be accepted as candidates for the degree of Master in Regional Planning. Those who have had substantial academic work in planning as undergraduates, equivalent to the courses given in the Department of Regional and City Planning at Cornell, will ordinarily earn the Master's degree in one year. Those who have not had this preparation will normally require two years to gain the degree. Each student follows a specialized plan of study, with special emphasis on the particular relationship the field of study which he pursued as an undergraduate has to planning. Thus, a graduate in Architecture will approach planning from his specialized background while acquiring a full knowledge of the manner in which the architect, the landscape architect, the public administrator, the economist, the sociologist, the geographer, the lawyer, and those in other related professions fit into the planning program.

Many related courses given in other departments of the University are open to students.

Instruction is supplemented by visiting lecturers and guest seminar leaders. During 1951, the following leaders in the field of City and Regional Planning were visiting lecturers:

Robert E. Alexander, Architect and City Planner, Los Angeles

H. Dale Bossert, Director, Erie County Planning Board

Frederick P. Clark, Planning Director, Regional Plan Association,
New York

Herbert H. Smith, Chief, Planning Section, New Jersey Department
of Conservation and Economic Development

Anatole Solow, Chief, Division of Housing and Planning, Pan-American
Union

Ernest Weissmann, Chief, Housing and Town and Country Planning
Sections, United Nations

Coleman Woodbury, Director, Urban Redevelopment Study, Chicago

Leslie Williams, Consulting Traffic Engineer, New York

Courses of Instruction

THE preceding analysis of the several courses of study leading to degrees showed them to consist of individual *courses of instruction*. All these individual courses are described in the list which now follows. Here they are arranged under heads appropriate to their subject matter. They are all elements of the regular work of the College of Architecture. In most of them the instruction is given by members of the Faculty of Architecture. In others—those which come toward the end of the list—the instruction is given by members of other Faculties.

Courses of instruction open to students not registered in the College of Architecture are marked with an asterisk (*) preceding the title of the course. The enrollment in any course is limited.

The time and place of each course of study and the name of the instructor will be given in a separate memorandum at the beginning of each term.

DESIGN

Instruction in architectural and landscape design is given by the design staff—Messrs. WELLS, HARTELL, MACKESEY, BARNETTE, CANFIELD, EDMONDSON, and QUELL—and by Visiting Critics. It consists of individual criticism over the drafting board. By appointment.

ARCHITECTURAL DESIGN . . . Among the courses leading to the degree of Bachelor of Architecture, design is the basic course and has the greatest number of hours allotted to it. It is in this sequence of courses that the student is expected to demonstrate his ability to solve specific problems in such a manner that the final result is a structure efficiently planned, solidly constructed, aesthetically satisfying, and in harmony with its surroundings. All other courses leading to this degree are considered as contributing to these objectives.

100, 101. *Introductory Design*. Two terms. Credit three hours a term. An introduction to the design and construction of buildings, considered in relation to their immediate environment. The student submits, by means of models and drawings, original solutions to a series of problems. The course begins with a study of three-dimensional abstract design and continues with a progressive sequence of small architectural compositions in a given topography. Lectures, discussions, and group and individual criticisms.

102, 103. *Intermediate Design*. Two terms. Credit four hours a term. Prerequisite, Courses 100 and 101.

104, 105. *Junior Design*. Two terms. Credit four hours a term. Prerequisite, Courses 102 and 103.

106, 107. *Senior Design*. Two terms. Credit five hours a term. Prerequisite, Courses 104 and 105.

108. *Advanced Design*. One term. Credit ten hours. Prerequisite, Courses 106 and 107.

109. *Thesis in Architecture*. One term. Credit ten hours. Prerequisite, Course 108.

119. *Elective Design*. Either term. Credit as assigned.

190. *Graduate Design*. Either term. Credit as assigned. A course for graduate students in Architecture.

LANDSCAPE DESIGN . . . Through the courses in landscape design the student learns to organize and plan land forms, to coordinate structure and site, and to use plant materials with due regard for their aesthetic and practical values. These courses are an essential part of the work in Land Planning and in Landscape Architecture.

150, 151. *Intermediate Landscape Design*. Two terms. Credit four hours a term. Prerequisite, Courses 102 and 103. One lecture discussion period each week on the theory of landscape design.

152. *Senior Landscape Design*. One term. Credit eight hours. Prerequisite, Courses 150 and 151.

154, 155. *Advanced Landscape Design*. Two terms. Credit eight hours a term. Intended primarily for graduate students.

156, 157. *Graduate Landscape Design*. Two terms. Credit eight hours a term. Prerequisite, Courses 154 and 155.

160. *Graduate Thesis in Landscape Architecture*. One term. Credit as assigned.

THEORY OF CONSTRUCTION

These courses (200-204, 206), with the course in concrete construction (C.E. 2715, described on page 35), deal in the beginning with the theories and progressively more with the practice of structural design.

Instruction is given by MESSRS. BAXTER and BROWN.

200. *Mechanics of Materials*. Spring term. Credit three hours. Prerequisite, Mathematics 161. Statics, simple unit stress, center of gravity, static moment, moment of inertia, strength of materials. Recitations.

201. *Mechanics of Materials*. Fall term. Credit three hours. Prerequisite, Course 200. Beams; shear and bending moment, unit stress due to bending and shear, deformation. Columns. Recitations.

202. *Mechanics of Materials*. Spring term. Credit three hours. Prerequisite, Course 201. Moment areas; restrained and continuous beams; moment distribution; direct stress and flexure; AISC specifications: lateral deflection, web strength, vertical deflection. Recitations.

203, 204. *Structural Design*. Throughout the year. Credit three hours a term. Prerequisite, Course 202. Lectures, computations, and reports. Graphic statics. Detailed design of steel skeleton frame, roof truss, plate girder, miscellaneous details, heavy timber building frame, truss details; masonry arch; retaining wall. (First term, 203, is a prerequisite for Concrete Design, C.E. 2715, and for Working Drawings 604.)

206. *Building Structure*. Fall term. Credit one hour. Prerequisite, Courses 203, 204, and C.E. 2715. Lecture and computation. Analysis of the structural design for commonly used roof and floor systems, for critical structural conditions typically encountered in buildings, and for the solution of foundation and footing problems.

PAINTING AND SCULPTURE

Work in all branches of the Fine Arts is offered and may be taken by any student in the University.

Instruction is given by Messrs. HARTELL, MAHONEY, DALY, HANSON, EVETT, COLBY, and ATWELL.

LECTURE COURSES . . .

350. **The Arts of Design*. Fall term. Credit three hours. A study of the interrelations of the arts of design: sculpture, painting, architecture, theater and stage design, and various minor arts. The course will be conducted with the cooperation of staff members of the Department of Speech and Drama. The means and methods of expression used by these arts will be discussed in relation to one another and to the civilizations and cultures of various epochs. The course will be conducted by practitioners in the various fields, and the artist's point of view will be stressed. The approach will be comparative rather than chronological. Lectures, discussions, demonstrations, assigned readings and exercises, examinations. No experience in the practice of art is required.

353. **The Problems of Painting*. Spring term. Credit three hours. Prerequisite, Courses 300 and 301 or Fine Arts 101 and 102. An analytical study of the formal problems of painting, intended to develop the student's understanding and appreciation of historical and modern art. Comparison of the artistic aims of various epochs and study of the technical problems of design, representation, and color as exemplified by the work of the artists of those epochs. Lectures, discussions, readings, studio exercises, and examinations.

356. **The Problems of Sculpture*. One term. Credit three hours. Prerequisite, Course 330. A course presented from the same point of view as Course 353 but dealing with sculpture. May be taken with Course 326.

GRADUATE SEMINARS . . .

395. *Seminar in the Theory of Art*. Either term. Credit two hours. May be repeated for credit. Open to graduate students. Special topics in the theory and criticism of art.

397. *Seminar in the Theory of Sculpture*. Either term. Credit two hours. May be repeated for credit. Open to graduate students.

398. *Seminar in Art Criticism*. Either term. Credit two hours. May be repeated for credit. Open to graduate students. A study of critical opinions, historical and modern, and their relation to problems in the theory of art.

399. *Seminar in the Teaching of Art*. Either term. Credit two hours. May be repeated for credit. Open to graduate students. Investigation of the methods, past and present, of teaching art. Practice in conducting classes. Offered with the cooperation of the School of Education.

STUDIO COURSES IN PAINTING AND COMPOSITION . . .

These courses constitute a series aimed to develop the student's understanding of the principles of pictorial composition and his skill in the use of those principles. Design, color, and representation are studied in their relation to artistic expression through problems executed in pencil, charcoal, watercolor, and oil, using still-life and landscape materials as well as the human figure.

In courses offering a choice of credit hours the credit to be gained must be arranged upon registration, counting one 2½-hour studio period for each credit hour.

Students expecting to take six or more hours of studio work will normally register for the first course given below:

300, 301. **Painting and Composition*. Throughout the year. Credit three hours a term.

302, 303. **Painting and Composition*. Throughout the year. Credit three hours a term. Prerequisite, Courses 300 and 301.

304, 305. **Painting and Composition*. Throughout the year. Credit three to five hours a term. Prerequisite, Courses 302 and 303.

306, 307. **Painting and Composition*. Throughout the year. Credit three to five hours a term. Prerequisite, Courses 304 and 305.

309. **Painting and Composition*. Either term. Credit as assigned. May be repeated for credit. Prerequisite 306-307. An elective course.

390. *Painting and Composition*. Either term. Credit as assigned. May be repeated for credit. A course for graduate students majoring in painting.

STUDIO COURSES FOR ARCHITECTS . . . The following courses correspond roughly to the earlier courses in the sequence given above but are especially arranged to meet the needs of students in Architecture and Landscape Architecture. Registration of other students is not ordinarily accepted.

310, 311. *Drawing and Painting*. Throughout the year. Credit three hours a term.

312. *Drawing and Painting*. Either term. Credit three hours. Prerequisite, Courses 310 and 311.

313. *Drawing and Painting*. Either term. Credit three hours. Prerequisite, Course 312.

319. *Drawing and Painting*. Either term. Credit as assigned. May be repeated for credit. Prerequisite, Course 313. An elective course.

SPECIAL STUDIO COURSES . . . The following courses constitute a study of drawing and composition with special emphasis on the construction and proportion of the human figure as used in pictorial art. Students in Courses 342 and 343 will paint as well as draw.

340, 341. **Figure Construction*. Fall and spring terms. The course may be begun in either term. Credit three hours a term.

342, 343. **Figure Composition*. Fall and spring terms. The course may be begun in either term. Credit three hours a term. Prerequisite, Courses 340 and 341 or equivalent.

349. **Figure Composition*. Either term. Credit as assigned. May be repeated for credit. Prerequisite, Courses 342 and 343. An elective course.

STUDIO COURSES IN SCULPTURE . . . The courses listed below constitute a series in which the problems of sculpture are studied through original exercises in various media. The principles of sculptural organization, as related to the material being presented and the medium being used, will be studied and applied. Figure composition and anatomy, as related to sculptural expression, will be studied through reference to the model. The processes of modeling, casting, carving, and the firing and glazing of pottery will be studied.

330, 331. **Sculpture*. Fall and spring terms. The course may be begun in either term. Credit three hours a term.

332, 333. **Sculpture*. Throughout the year. Credit three to five hours a term. Prerequisite, Courses 330 and 331.

334, 335. **Sculpture*. Throughout the year. Credit three to five hours a term. Prerequisite, Courses 332 and 333.

339. **Sculpture*. Either term. Credit as assigned. May be repeated for credit. Prerequisite, Courses 334 and 335. An elective course.

396. *Sculpture*. Either term. Credit to be assigned. A course for graduate students majoring in sculpture.

STUDIO COURSES IN TECHNICS . . .

320, 321. **Printmaking*. Fall and spring terms. The course may be begun in either term. Credit three hours a term. May be repeated for credit. Prerequisite, Courses 300 and 301. Study and practice of the methods of engraving, etching, block printing, lithography, and silk screen printing.

322, 323. **Methods and Materials of Painting*. Throughout the year. Credit three hours a term. Prerequisite, Courses 300 and 301. A study of the effect of the various materials, media, and technics upon styles of painting. Mosaic, egg tempera, fresco, and the various methods of oil painting will be studied. Lectures, discussions, readings, studio exercises, and examinations.

326, 327, 328. **Methods and Materials of Sculpture*. Three terms. Credit three hours a term. Terms may be taken separately and in any order. Prerequisite, Courses 330 and 356. First term: carving, studio work in carving of wood, stone, and marble; direct carving method; use and care of tools. Second term: casting and firing; waste and piece molds; casting in ceramic materials; glazes; use of the potter's wheel. Third term: metal working; lost wax and sand casting; materials, tools, and methods of pouring metals; beating of metals.

HISTORY OF ARCHITECTURE AND THE FINE ARTS

The several courses in history offered in the College of Architecture are primarily in the form of lectures. Chronological sequence is followed, with such varying emphasis upon aesthetic, social, political, and economic considerations as may be required.

HISTORY OF ARCHITECTURE AND THE ARTS . . . Courses 404-409 comprise a six-term sequence. They provide a survey of the history of architecture and of the arts of painting and sculpture, considered as social and cultural expressions of Western civilization. Although the emphasis in each term is on architecture, lectures are also given on parallel developments in painting and sculpture. This sequence forms part of the professional training of students in Architecture.

Lectures on the History of Architecture are given by Mr. DETWEILER and on the History of Painting and Sculpture by Mr. FINLAYSON.

404. *The Ancient World before Rome*. Fall term. Credit three hours.

405. *The Rise and Fall of the Roman Empire*. Spring term. Credit three hours.

406. *The Middle Ages*. Fall term. Credit three hours.

407. *The Renaissance*. Spring term. Credit three hours.

408. *Colonial America and the Nineteenth and Twentieth Centuries in the United States and Europe*. Spring term. Credit three hours.

409. *Modern Architecture*. Fall term. Credit two hours.

SPECIAL COURSES IN HISTORY . . .

400, 401. **History of Architecture*. Throughout the year. Credit three hours a term. A course primarily intended for students who are not architects but who are interested in a brief survey of the history of architecture and its relationship with parallel social, economic, and political trends. No experience in drawing or knowledge of structural elements is required. Either or both terms may be taken for credit.

450. **History of Landscape Architecture*. One term. Credit three hours. Landscape design in Western civilization from the earliest times up to about 1850, with special emphasis upon the Renaissance.

470, 471. **Historical Seminar in Architecture*. Throughout the year. Credit two hours a term. Investigation of assigned topics in the history of architecture. Open to graduate students and to upperclassmen by permission.

HISTORY OF PAINTING AND SCULPTURE . . .

420. **Romanesque and Gothic Sculpture*. Fall term. Credit three hours. Not open to freshmen. Sculpture in the major European countries from 1000 A.D. through the Gothic period. Mr. FINLAYSON.

421. **Gothic Painting*. Spring term. Credit three hours. Not open to freshmen. Painting in Italy in the fourteenth century, and in France, Germany, and the Netherlands in the fourteenth and fifteenth centuries. Mr. FINLAYSON.

424. **American Painting*. Fall term. Credit three hours. Open to upperclassmen. Painting in the United States from colonial days to the present. Mr. FINLAYSON.

426. **Seventeenth and Eighteenth Century Painting*. Fall term. Credit three hours. Not open to freshmen. Painting of the Baroque and Rococo periods in the major European countries. Mr. FINLAYSON.

427. **Nineteenth and Twentieth Century Painting*. Spring term. Credit three hours. Not open to freshmen. Nineteenth century painting in France, England, and Germany, and the major movements in twentieth century painting. Mr. FINLAYSON.

428. **Art since Cézanne*. Fall term. Credit three hours. Not open to freshmen. Cézanne, the Post-Impressionists, and subsequent tendencies in European and American painting and sculpture. Emphasis will be placed on developments since the death of Cézanne in 1906. Mr. DALY.

429. **Seminar in Art History*. Spring term. Credit three hours. Registration by permission of the instructor. A special field of study of interest to the students in the course is selected each year. The course is conducted as a round-table discussion with student reports. Mr. FINLAYSON.

431. **Studies in Contemporary Art*. Spring term. Credit three hours. Not open to freshmen. A critical analysis of three or four major painters and sculptors representing typical contemporary approaches to art. Lectures, discussions, and reports. [Will not be offered in 1952-53.]

COURSES IN THE COLLEGE OF ARTS AND SCIENCES . . . Other courses in the history of painting and sculpture are open to students in the College of Architecture. For further information, see the *Announcement of the College of Arts and Sciences*.

GRAPHICS

500, 501. *Descriptive Geometry*. Throughout the year. First term, credit four hours; second term, credit three hours. Lectures and drawing. First term, the fundamental problems of the subject, involving points, lines, planes, plane solids, plane and space curves, curved surfaces, tangencies, and intersections. Second term, a study of shades and shadows as a direct application of descriptive geometry, with light from any source, followed by the conventional constructions for architectural form; perspective and various derived techniques for its practical application. MESSRS. BAXTER and BROWN.

APPLIED CONSTRUCTION

The following courses are planned to correlate all the previous work of the student. They are based on the concept that office practice requires drawings, specifications, and contracts developed from a thorough knowledge of the client and his problems, as well as the fact that working drawings, specifications, and contracts must be thoroughly related and checked one against the other. Problems are given, to be solved just as they should be solved in an office.

Instruction by MESSRS. TILTON, WELLS, BROWN, BARNETTE, CANFIELD, and EDMONDSON.

601, 602. *Building Materials and Construction*. Two terms. Credit three hours a term. Prerequisite, four terms in the College of Architecture or the equivalent. A brief study of structural materials and details of construction with particular reference to concrete, masonry,

ordinary construction, slow-burning construction, fireproof construction. Lectures and discussions.

604. *Working Drawings*. One term. Credit three hours. Prerequisite, Courses 105, 202, and 601. Criticisms by appointment. The course consists of the design of structures, demonstrated by preliminary sketches, small-scale and large-scale working drawings, and structural reports.

605. *Specifications and Mechanical Equipment*. One term. Credit three hours. Prerequisite, Course 604.

621. *Professional Practice*. One term. Credit one hour. A seminar devoted to discussion of professional ethics and other problems arising in the day-to-day procedures in office practice. Registration limited and by permission only.

650. **Planting Design*. One term. Credit three hours. Prerequisite, Plant Materials 10 and 13. Open to election by special permission. Lectures, sketching, drafting, and field trips.

660. *Landscape Construction*. One term. Credit three hours. Prerequisite, Mechanics 200 and 201, C.E. 2112, and C.E. 2610. Problems involving the application of the principles of mechanics to the design of structures of a simpler sort, such as post and lintel construction, short-span truss, short-span arch, a small bridge, simpler types of low dams, and retaining walls, foundations, and culverts. Problems in earthwork, grading, and location plans, sections, profiles and cross sections, working drawings. Lectures and drawing periods. Hours to be arranged.

REGIONAL AND CITY PLANNING: HOUSING

Instruction in Regional and City Planning is offered by the Colleges of Architecture and Engineering in cooperation. The work aims to give the student an appreciation of the special problems of large-scale planning. Study is made of past and possible future achievement in the planned and controlled development of public and private properties as a necessary basis for better living. The diversity and the difficulty of the problems of large-scale planning are emphasized, as well as the fact that the solution of these problems lies in the united efforts of many varied groups. In the courses open to students of all colleges of the University the material is presented in such a manner that technical knowledge is unnecessary. Courses are also offered, however, which permit a technically trained student, graduate or undergraduate, to further his knowledge and abilities in the field of his special interest.

Instruction is given by Messrs. MACKESY, DETWEILER, EDMONDSON, REPS, and HOOVER.

700. **History of City Planning*. Fall term. Credit three hours. Open to graduates and upperclassmen. The history of the planning of com-

munities from ancient times to the present. Lectures, assigned readings, and examinations.

710. **Principles of City and Regional Planning*. Fall term. Credit three hours. Open to graduates and upperclassmen. A review of the basic influences in the development of cities. A general view of the theory and accepted practice of city and regional planning, including a study of the social, economic, and legal phases. Lectures, assigned readings, and examinations.

711. **City Planning Practice*. Spring term. Credit three hours. Prerequisite, Course 710. The procedures and techniques of gathering and analyzing data for municipal planning studies. The selection and integration of data for use in planning. Practical application of the theories of city planning. Office practice. Lectures, assigned readings, reports.

713. **Housing*. Fall term. Credit two hours. Registration limited. Prerequisite, Course 710. An introduction to the theory and standards of housing practice through analysis and comparison of various existing examples, considering the social, economic, and technical sides of the work. Lectures, assigned reading, and reports.

714. *Seminar in Regional and City Planning*. Two terms a year. Credit one hour each term. Investigation of assigned topics on particular aspects of the subject with emphasis on either urban or regional planning.

715. **Public Problems in Urban Land Use*. Fall term. Credit two hours. Prerequisite, Course 710. Urban land policies, rent, taxation, and market factors.

717. **Zoning Principles and Practice*. Spring term. Credit two hours. Prerequisite, Course 710. Technical and legal aspects of drafting and administering zoning regulations.

718. *City Planning Design*. Credit as assigned. Limited to graduate students and, by permission, to seniors who may substitute it for Design 108.

719. *City Planning Research*. Credit as assigned. Limited to graduate students.

MATHEMATICS

The courses under this head are given by the Department of Mathematics in the College of Arts and Sciences.

133. *Plane Trigonometry*. One term. Credit three hours, except for students offering trigonometry for entrance.

161. *Analytic Geometry and Calculus*. One term. Credit three hours. Prerequisite, Mathematics 133 or its equivalent.

ENGLISH

The following course is offered by the Department of English in the College of Arts and Sciences.

111, 112. *Introductory Course in Reading and Writing*. Throughout the year. Credit three hours a term. English 111 is a prerequisite of 112. The aim of this course is to increase the student's ability to communicate his own thought and to understand the thought of others.

PLANT MATERIALS

The courses listed under this head are given in the Department of Floriculture and Ornamental Horticulture of the New York State College of Agriculture.

10. *Taxonomy of Cultivated Plants*. Fall term. Credit four hours. A study of the kinds of cultivated ferns and seed plants and their classification into genera and families. Emphasis is placed on methods of identification, the preparation and use of analytical keys, the distinguishing characteristics of the families concerned and their importance in ornamental horticulture.

12. *Herbaceous Plant Materials*. Spring term. Credit three hours. Prerequisite, Course 10 or permission to register. A study of the ornamental herbaceous plants used in landscape and garden plantings. Emphasis is placed on the identification, use, and culture of spring-flowering bulbs and perennials. The class visits Rochester parks and gardens in late May.

13. *Woody-Plant Materials*. Spring term. Credit four hours. Prerequisite, Course 10 or permission to register. A study of the trees, shrubs, and vines used in landscape planting. Emphasis is placed on their characteristics and value for use as landscape materials. The class will visit Rochester parks and gardens.

ENGINEERING

The courses listed under this head are given in the School of Civil Engineering.

2111. *Elementary Surveying*. Credit two hours. Spring term. Two recitation or field periods a week. Use and care of steel tape, level, transit, and plane table; note keeping; fundamental surveying methods; measurement of lines, angles, and differences of elevation. Textbook: Tracy, *Surveying Theory and Practice*.

2112. *Advanced Surveying*. Credit three hours. Fall term. Prerequisite, Course 2111. Two recitations and one field or mapping period a week. Principles of land surveying; topographic, hydrographic, geodetic, mine, and city surveys; elements of practical astronomy; mapping. Textbook: Tracy, *Surveying Theory and Practice*.

2113. *Route and Aerial Surveying*. Credit three hours. Spring term. Prerequisite, Course 2112. One recitation and two field or computation periods a week. Principles of route surveying. Theories of simple, transition, and vertical curves, and the determination of volumes of earthwork are combined with appropriate field problems. The paper location of a route is made on a given map, and then the profile and cross-sections serve as a basis for earthwork computations. Elementary photo-interpretation and photogrammetry.

2131. *Elementary Surveying*. Either term. Credit one hour. Use of steel tape, level, and transit. Fundamentals. Textbook: Kissam, *Surveying*. One 2½-hour period a week.

2610. *Highway Engineering*. One term. Credit three hours. Prerequisites, C.E. 2113 and C.E. 2725. Design, construction, and maintenance of highways and city streets. Location and alignment (aerial photographic methods included), width, capacity, and geometrical design based on traffic demands. Drainage, soils, stabilization, aggregates. Bituminous materials. Structures; traffic control; landscaping. Economics and administration. Construction methods and equipment for grading and paving of low cost, flexible, and rigid pavement. Analysis and correction of characteristic pavement failures.

2715. *Reinforced Concrete Design*. One term. Credit three hours. Prerequisite, Architecture 204, or C.E. 2701. A first course in construction with reinforced concrete. The elementary theory is applied to rectangular beam, slabs, T-beams, beams reinforced for compression, columns, and footings. Shear, diagonal tension, and direct stress combined with flexure are treated. Several design reports are required which include reinforcement drawings, schedules, and formwork. Textbook: Urquhart and O'Rourke, *Design of Concrete Structures*.

2716. *Advanced Reinforced Concrete Design*. Elective for seniors and graduate students. Credit three hours. Fall term. Three two-hour periods a week. Prerequisite, C.E. 2715. Comparative design of large retaining walls. Multiple footings. Flat slab construction. Special floor systems. Elements of arch analysis with application to a simple design.

2720. *Foundations*. Credit three hours. Two lectures and one computing period a week. Prerequisites, C.E. 2715, 2725. Study of the structural problems encountered in foundation work. Retaining walls, sheet piling, spread footings, piles, piers, abutments, cofferdams, caissons, underpinning. Design problems. Textbook: Andersen, *Substructure Analysis and Design*.

2725. *Elements of Soils Engineering*. Credit three hours. Either term. Two lectures and one laboratory period a week. The elements of the formation and composition of soil, its fundamental properties, and its behavior as an engineering material. Instruction in principles of soil identi-

fication and classification, basic terminology and soil characteristics such as gradation, permeability, compressibility, consolidation, and shearing strength with applications to simple problems of seepage, settlement, bearing capacity, stability of earth slopes. Theory of lateral earth pressure. Discussion of methods and equipment for soil exploration. Laboratory tests for experimental determination of the soil characteristics mentioned above and evaluation and use of data.

2902. *Engineering Law*. Open to seniors. One term. Credit three hours. An introductory course in the laws of contract, tort, agency, real property, water rights, forms of business organization, sales, and negotiable instruments; special emphasis on contract documents required on construction work; collateral topics such as workmen's compensation, mechanics' lien, arbitration, and patent law are also included. Lectures and recitations, three hours a week. Textbook: Tucker, *Contracts in Engineering*.

MILITARY TRAINING

The University requirement in military training (see page 8 above and also the *Announcement of the Independent Departments*) may be satisfied:

(a) by four terms of work in the Department of Military Science and Tactics (Military Science 1, 2 and one of the following pairs: 23, 24; 33, 34; 43, 44; 53, 54; or Military Science 61, 62, 63, 64);

(b) by four terms of work in the Department of Air Science and Tactics (Military Science 1, 2; Air Science 73, 74; or 83, 84);

(c) by four terms of work in the Department of Naval Science while registered either as a regular student or as a contract student in the Naval ROTC (Naval Science 101, 102, 201, 202).

Students who have been enrolled in the armed services are exempt from the requirement in military training. A student who is enrolled in the Organized Naval Reserve Program may postpone the military training requirement while he is so enrolled, and the completion of two calendar years of work in the Program shall satisfy the requirement. Any student registered in the Big Red Band may postpone the military training requirement for the term in which he is so registered, and any student who satisfactorily completes a term of work in the Big Red Band shall be deemed to have satisfied one term of the University military training requirement.

Advanced courses of two years in military and air science and tactics are elective and may qualify students for appointments as Second Lieutenants in the Regular Army or Air Force, the Officers Reserve Corps, U. S. Army, or the U. S. Air Force Reserve.

A maximum of six hours in advanced military science and tactics or

in air science and tactics may be offered as elective credit toward the baccalaureate degree in the College of Architecture.

The Department of Naval Science offers a four-year course of training which may qualify students for appointments as Ensigns in the Regular Navy or Naval Reserve or as Second Lieutenants in the Marine Corps or Marine Corps Reserve.

Students with the necessary preparation may fulfill the requirements of the NROTC program and also qualify for a degree from the College of Architecture. Such students must meet all the regular requirements for graduation from the College as well as those prescribed by the Bureau of Naval Personnel. NROTC courses are acceptable for elective credit in the College.

PHYSICAL TRAINING

The University requirement in physical training (see page 8 above and also the *Announcement of the Independent Departments*) may be satisfied by four terms of work in the Department of Physical Education. For this purpose Physical Education 1, 2, 3, and 4 are available to men, and Physical Education 51, 52, 53, and 54, to women.

Additional courses in physical education are described in the *Announcement of the Independent Departments*.





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